WHAT IS CLAIMED IS:

1. A pattern formation apparatus, comprising:

a substrate including a concave section;

a top plate that is combined with a surface of the substrate where the concave section is provided;

a combining layer, provided on at least one of the substrate and the top plate, via which the substrate and the top plate are combined with each other, and

nozzles formed by melting the combining layer such that the substrate and the top plate are combined with each other, the nozzles jetting out ink such that a pattern is formed.

2. The pattern formation apparatus as set forth in claim 1, wherein the combining layer is made mainly of metal or silicon dioxide.

3. The pattern formation apparatus as set forth in claim 1, wherein at least one of the substrate and the top plate is made mainly of silicon, glass, or aluminum oxide.

4. The pattern formation apparatus as set forth in claim 1, wherein the substrate and the top plate include surfaces to be combined with each other whose relative

roughness is not more than 0.1.

5. The pattern formation apparatus as set forth in claim 1, wherein each of the nozzles has an opening section from which the ink is jetted out, and the opening section has an area of not more than 50μm^2.

6. A method for manufacturing a pattern formation apparatus, comprising the steps of:

(i) combining a surface of a substrate where a concave section is provided with a top plate such that nozzles for jetting out ink are formed; and

(ii) melting a combining layer, provided on at least one of the substrate and the top plate, such that the substrate and the top plate are combined with each other via the molten combining layer.

7. The method as set forth in claim 6, further comprising the step of:

(iii) forming the combining layer.

8. The method as set forth in claim 7, wherein, the combining layer includes a first combining layer made mainly of gold and a second combining layer made mainly of gold, aluminum, or tin.

9. The method as set forth in claim 6, wherein, in the step (ii), the combining layer is molten by applying supersonic waves to at least one of the substrate and the top plate, concurrently with heating.

10. The method as set forth in claim 7, wherein the combining layer is made mainly of silicon dioxide.

11. The method as set forth in claim 10, wherein, the combining layer is formed on the top plate, such that the substrate and the top plate are combined with each other via the combining layer.

12. The method as set forth in claim 6, wherein, in the step (ii), the substrate and the top plate are pressed against each other and the combining layer is molten by heat.

13. The method as set forth in claim 6, wherein, in the step (ii), the top plate is superposed on the substrate, and from a top plate side, laser light is projected to a space between grooves of the concave section of the substrate.

14. The method as set forth in claim 13, wherein, the top plate is a low-melting glass.

15. The method as set forth in claim 6, wherein, in the step (ii), argon ion beam is projected to the combining layer, and the substrate and the top plate are pressed against each other.

16. The method as set forth in claim 15, wherein, at least one of the substrate and the top plate is made mainly of silicon, silicon dioxide, or aluminum oxide.

17. The method as set forth in claim 15, wherein, on at least one of the substrate and the top plate, a metal thin film is formed, via which the substrate and the top plate are combined with each other.

18. The method as set forth in claim 6, wherein each of the nozzles has an opening section from which the ink is jetted out, and the opening section has an area of not more than $50\mu m^2$.